



## Department of Energy

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MAY 27 1998

DOE-0810-98

Mr. Gene Jablonowski, Remedial Project Manager  
U.S. Environmental Protection Agency  
Region V, SRF-5J  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5th Street  
Dayton, Ohio 45402-2911

Dear Mr. Jablonowski and Mr. Schneider:

### COMMENT RESPONSES/REVISIONS TO THE DRAFT IMPLEMENTATION PLAN FOR ABOVE-GRADE DECONTAMINATION AND DISMANTLEMENT OF THE MAINTENANCE/TANK FARM COMPLEX

- References:
- 1) Letter from Jablonowski to Reising, "Technical Review Comments on Maintenance/Tank Farm Complex Implementation Plan for Above-grade Decontamination and Dismantlement," dated March 20, 1998.
  - 2) Letter from Schneider to Reising, "DOE-FEMP Comments:M/TF Complex Implementation Plan," dated May 7, 1998.

Please find enclosed DOE responses to the U.S. Environmental Protection Agency (U.S. EPA) comments to the February 1998 draft Maintenance Tank Farm Complex Implementation Plan for Above-Grade Decontamination and Dismantlement (D&D).

The U.S. EPA comments dated March 20, 1998, included two General Comments and seven Specific Comments. The Ohio Environmental Protection Agency (OEPA) response was received on May 7, 1998, without comment. The enclosed comment response package consists of three sections: 1) a reiteration of U.S. EPA comments followed by a Department of Energy (DOE) response and description of action taken; 2) a table that identifies a significant DOE enhancement made to the draft version; and 3) redline/strikeout change pages of the Implementation Plan, which were prepared as a result of the U.S. EPA comments and the significant DOE enhancement. Upon final resolution of these comments, DOE will prepare the Implementation Plan in final form for distribution.

If you have any questions, please contact Anand C. Shah at (513) 648-3146.

Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP:Shah

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# OPERABLE UNIT 3

## MAINTENANCE/TANK FARM COMPLEX IMPLEMENTATION PLAN

### COMMENT RESPONSE PACKAGE



MAY 1998

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT  
FERNALD, OHIO

U. S. DEPARTMENT OF ENERGY  
FERNALD AREA OFFICE

## INTRODUCTION

United States Department of Energy (DOE) comment responses have been provided on the following pages to address United States Environmental Protection Agency (U.S. EPA) and Ohio comments to the February 1998 draft Maintenance/Tank Farm Complex Implementation Plan for Above-Grade Decontamination and Dismantlement. The U.S. EPA comments, dated March 20, 1998, include two General Comments and seven Specific Comments. The Ohio EPA response, dated May 7, 1998, was returned without comment.

This comments response document is divided into three sections, which are described below:

- Section 1: Includes a reiteration of U.S. EPA comments to the draft Maintenance/Tank Farm Complex D&D Implementation Plan, each of which is followed by a DOE response and description of action taken.
- Section 2: Identifies a significant DOE enhancement made to the implementation plan.
- Section 3: Includes the redline/strikeout change pages of the implementation plan, which were prepared as a result of U.S. EPA comments. These change pages represent the draft final version of the document. Upon approval of the revisions provided in this comment response package, the implementation plan will be prepared in final form for distribution.

## SECTION 1

U.S. EPA Comments on the Draft Maintenance Tank/Farm Complex  
Implementation Plan and DOE Comment Responses

## U.S. EPA GENERAL COMMENTS

U.S. EPA General Comment #1

*As part of the OU3 decontamination and dismantlement (D&D) project at the FEMP, the U.S. DOE researched and evaluated D&D technologies for incorporation in OU3 remedial activities. However, it is not clear whether DOE is incorporating or promoting use of new and innovative D&D technologies for the MTF project. This and future implementation plans should include a section that discusses the potential or planned applications of innovative D&D technologies.*

DOE Response:

Agree. The promotion and/or incorporation of new and innovative technologies is to be encouraged within the MTF project to accomplish safer, quicker, or less expensive D&D. Implementation of these technologies is accomplished through the Performance Based Specifications (Appendix C).

Contractors will be strongly encouraged to propose additional creative approaches to the D&D Program, which will be evaluated by FDF Project Management for potential efficacy.

As new and innovative technologies are proven to be safe and efficient for D&D purposes, they will be added to the list of approved technologies in the applicable specifications.

DOE Action:

A new Subsection 2.5.7 has been added to the Implementation Plan, which makes it clear that the DOE is incorporating and promoting the use of new and innovative D&D technologies for the MTF D&D Project. For the redlined addition of Subsection 2.5.7, please refer to page 39 (lines 14-22), in Section 3.0 of this document.

U.S. EPA General Comment #2

*The material recycling and reuse section briefly discusses disposition alternatives for the 501 tons of potentially recyclable accessible metals from the MTF Complex components. However, the text that describes potential recycling and reuse alternatives is not clear. Moreover, it does not appear that a concerted effort was made to evaluate current options for recycling structural steel on or off site. The text should be revised to clarify the potential recycling and reuse alternatives considered, particularly with regard to recycling of structural steel.*

DOE Response:

Agree. Accessible metals (OU3 Debris Category A) from the Complex have been evaluated for potential recycling options using the Decision Methodology For Fernald Material Disposition Alternatives (the "Decision Methodology"), and a detailed summary of that evaluation is available in Appendix B. As shown in Table 2-4, there are 501 tons of potentially recyclable accessible metals from all Maintenance/Tank Farm Complex components, and these accessible metals were evaluated by comparing the four leading alternatives to on-site disposal.

**U.S. EPA Comments on the Draft Maintenance Tank/Farm Complex  
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(Continued)**

Table B-1 (Appendix B) shows that the estimated cost of placing all 501 tons of accessible metals into the On-Site Disposal Facility is \$40,000, and the cost of any of the other four alternatives is significantly higher. As an example, the cost of recycling the structural steel under the "Recycle 2000" alternative is \$1.20 per pound, compared with \$.04 per pound to place this steel in the OSDF. Therefore, of the three phases of the Decision Methodology (Threshold Phase, Life Cycle Analysis Phase, and Decision Phase), only the first phase was applied since the comparative evaluation of project costs for each alternative showed that the total costs for each of the recycling options greatly exceed the 25 percent total cost criteria compared to the OSDF. The logic of this approach and the estimated costs of the alternatives are derived from the Plant 4 Case Study, which will be provided separately upon request.

DOE Action:

The referenced Subsection 2.3.6 of the text has been revised, and has been replaced by the above response. For the revised first paragraph of Subsection 2.3.6, please refer to page 25 (lines 3-28) in Section 3.0 of this document.

**U.S. EPA SPECIFIC COMMENTS**

U.S. EPA Specific Comment #1

*Section 1.2 discusses the scope of work for the Maintenance/Tank Farm Complex project. The text states that Component 20H and Buildings 64 and 65 may be included in the scope of the project at a later date. The text also indicates that DOE will notify the regulatory agencies if Buildings 64 and 65 are added to the project scope. The text should be revised to add that the regulatory agencies will be notified if Component 20H is added to the project scope.*

DOE Response

Agree. It has recently been decided that the decontamination and dismantling of Building 64 (Thorium Warehouse) and Building 65 (Old Plant 5 Warehouse) will be included in the Maintenance/Tank Farm Complex D&D Project. Accordingly, the schedule has been revised to reflect the added scope.

Should the Maintenance/Tank Farm project exercise the option of including Building 20H in its scope, the regulatory agencies will be notified at that time.

DOE Action

The referenced text has been revised to reflect the above. For the revised implementation plan text in redline/strikeout format, please refer to pages 2 (lines 22 and 23, 26-29); 3 (lines 9-13, 15-25); 9 (lines 17-20); and 56 (Figure 4-1) in Section 3.0 of this document.

U. S. EPA Specific Comment #2

*The text states that DOE will notify the regulatory agencies of any significant changes to the project design before its implementation. DOE should clarify and provide an example of what is meant by a significant change in terms of the Maintenance/Tank Farm Complex.*

**U.S. EPA Comments on the Draft Maintenance Tank/Farm Complex  
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(Continued)**

DOE Response

Comment acknowledged. A significant change is one that requires a change to the Certified for Construction (CFC) design package that alters the implementation strategy represented in the implementation plan. An example of such a change would be a modification to the work scope condition/specification that would allow a new or innovative structural decontamination or dismantlement technique not previously stated in the implementation plan.

DOE emphasizes that it has agreed to provide notification of significant changes to the design prior to their implementation. Should U.S. EPA have any concerns regarding any significant design change, DOE will properly address those concerns as soon as practicable. It is also emphasized that there may be instances during field implementation of each D&D project where circumstances dictate that changes must occur rapidly to abate potentially serious situations (e.g., worker safety) and DOE may need to act immediately.

It is believed that the DOE's practice of advance notification for any significant change, which has been in place for the previous D&D projects, meets the commitments made in the OU3 Integrated RD/RA Work Plan. The OU3 Integrated RD/RA Work Plan describes in Section 4.2.2 the process that has been agreed upon by both U.S. EPA and Ohio EPA to address design changes. That provision is provided below:

Construction Change Requests/Engineering Change Proposals

As OU3 remediation progresses, the original design may require modification. At that time the remedial design subcontractor will perform any additional design required to address the field modification. Significant changes to the design will require CFC modification and may require that affected activities be suspended until the revision has been completed and approved. At the same time, while the CFC remedial design is being revised, DOE will determine, in consultation with the U.S. EPA, if there is a need to perform either of the following: amend the RODs; submit to U.S. EPA an explanation of significant difference to the RODs; amend this work plan; and/or amend the implementation plan. Since each design package will provide performance-based specifications rather than detailed specification, it is not anticipated that a CFC remedial design will require significant changes.

The RD/RA Work Plan provision above outlines the commitment for DOE to consult with U.S. EPA on significant changes to determine the proper course of action. DOE believes that rather than list all potential examples of what would and would not require prior approval, both U.S. EPA and DOE will have an opportunity prior to implementation of a significant change to discuss any concerns related to a particular example and whether or not formal approval is required.

DOE Action

The final paragraph of Section 1.2 reaffirms the DOE's intent to inform the regulatory agencies of any significant changes to the design prior to implementation and no further action is believed to be necessary.

U.S. EPA Specific Comment #3

*The text discusses sequencing of the remediation for the Maintenance/Tank Farm Complex. However, Components G-001 and G-008 are not included in this discussion. The text should be revised to describe how these components will be addressed in the remediation sequence.*

**U.S. EPA Comments on the Draft Maintenance Tank/Farm Complex  
Implementation Plan and DOE Comment Responses  
(Continued)**

DOE Response

Agree. Although the actual sequence of the project activities may vary, it is anticipated that the new water storage tank construction will begin prior to remediation of MTF components. The remediation sequence begins with Tank Farm Components 19A, 19C, 19D and 19E since these will be available for decontamination first. D&D of Building 12A and the ancillary structures will start after the commencement of the Tank Farm Components. The ancillary structures 12B, 12C, 12D, G-001, and G-008 will be done concurrent with Building 12A and will be followed by Components 24B, 38A, 38B, and 20A. If it is determined that the SCEP will not use Component 20H, it will be dismantled after Component 20A. Buildings 64 and 65 will be last in the D&D sequence.

DOE Action

The referenced text has been revised to include G-001 and G-008 in the overall sequencing. For the revised Section 2.1 in redline/strikeout format, please refer to page 9 (lines 8-14) in Section 3.0 of this document.

U.S. EPA Specific Comment #4

*The text states that in the event that containers are not available at the start of Maintenance/Tank Farm Complex D&D, an alternate material storage plan has been developed. The text indicates that Category A, B, D, and E debris will be stockpiled on the Component 12A, 19A, or 20H slab instead of on the Plant 1 pad. It is unclear (1) why containers would not be available to store debris on the Plant 1 pad and (2) why the debris would not be stockpiled on the Plant 1 pad. Lines 23 and 24 of Page 20 state that materials generated from D&D of Components 12A, 12B, 12C, 12D, 20A, 24B, 38A and 38B will be stored on the Component 12A slab. Line 5 of Page 21 then states that the decision to use the Component 12A slab for bulk storage of Category A, B, D, and E debris has been made in accordance with the authority and criteria established in the OU3 integrated remedial design/remedial action work plan. The text suggests that DOE has already decided that it will use the alternate material storage plan. Overall, the text on Pages 20 and 21 describing interim storage and disposition of materials is confusing and should be revised to clarify the issues raised above.*

DOE Response

Agree. The alternate material storage plan has been developed to take into account the contingency that for whatever reason, movement of debris into the On-Site Disposal Facility might be delayed. Such a delay could result in a reduction of available containers, such as roll-off boxes; and could also cause a decrease in the available storage area of the Plant 1 pad. This type of delay is not imminent, nor even highly probable, but the alternate material storage plan was included as a part of the Implementation Plan to try to cover as many contingencies as possible.

It is true that several separate issues are covered under the Section "Interim Storage/Disposition", which can cause confusion.

DOE Action

The referenced text has been revised to clearly distinguish between the intended course of action and the alternate material storage plan. This has been done by creating Subsections titled "Primary Interim Storage/Disposition Plan" and "Alternate Interim Storage/Disposition



**U.S. EPA Comments on the Draft Maintenance Tank/Farm Complex  
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Plan". Also, a separate Section titled "Material Tracking and Reporting" has been created to separate the SWIFTS discussion. For the revised portion of Section 2.3.4 in redline/strikeout format, please refer to page 21 (lines 2, 10-27); page 22 (lines 1-6, 12, 16, 19, 20, 22, 23, 25, 28); and page 23 (lines 3, 7-9) in Section 3.0 of this document.

**U.S. EPA Specific Comment #5**

*The text refers to commingling of OU3 debris categories A, B, D, and E. Commingling of debris is acceptable contingent upon DOE's ability and commitment to track the waste category quantities in interim storage. The text should be revised to state that the quantity of commingled debris in interim storage will be tracked according to its waste category.*

**DOE Response**

Agree. OU3 Categories A, B, D, and E debris are classified as OSDF Category 2 material. Therefore, commingled Categories A, B, D, and E quantities will be tracked as Category 2 debris in interim storage. Estimated quantities for each of the OU3 debris categories will be provided in the Project Completion Report.

**DOE Action**

The referenced text has been revised to describe how the commingled waste will be tracked, per the above. For the addition to Subsection 2.3.4 in redline format, please refer to page 23 (lines 25-28) in Section 3.0 of this document.

**U.S. EPA Specific Comment #6**

*The text describes the phases of the decision-making methodology regarding material recycling and reuse. The text indicates that only the first phase was applied because each of the recycling alternatives had total costs much more than 25 percent greater than the cost of using the On-Site Disposal Facility. Section 2.3.6 should be revised to include a table presenting the cost data used to reach this conclusion.*

**DOE Response and Action**

Please refer to General Comment #2.

**U.S. EPA Specific Comment #7**

*The text states that radiological contamination surveys demonstrate that component surfaces other than overhead piping in Component 12A meet release criteria for exposure to the environment. The release criteria are provided on Page 32, but it appears that the text is citing radiological data summarized in Table 2-1 on Page 11. The text should be revised to clearly cite this table. In addition, it appears that several results for beta-gamma total, including the average results of Components 38B and 19D and the maximum results for many components, do not meet the release criteria. The text should be revised to address this issue.*

**DOE Response**

Agree. Table 2-1 is a summary of average radiological data for the various Components, whereas Section 2.5.5 discusses the actual release criteria for opening a structure to the

**U.S. EPA Comments on the Draft Maintenance Tank/Farm Complex  
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environment per Specification Section 01517, Article 3.1.D.1. It is possible that within any given Component, certain areas may indicate radiological activity above facility release levels; however, Table 2-1 serves only as a general indicator of the overall radiological levels for the specific Component. The uses for the data in Table 2-1 are described in the bulleted items that precede the Table. Although the radiological survey data summarized in Table 2-1 provide DOE and the subcontractor with a general radiological condition of each component, the primary purpose of the data summarized in that table is to support environmental, and health & safety evaluations of the work area. Radiological surveys taken during D&D will determine whether the facility release criteria have been met.

**DOE Action**

DOE has changed Section 2.5.5 to clarify the relevance of data presented in Table 2-1. For the revised second paragraph of Subsection 2.5.5 in redline/strikeout format, please refer to page 34 (lines 9-21) in Section 3.0 of this document.

## SECTION 2

**Other Significant DOE Enhancements to the  
Draft Maintenance/Tank Farm Complex Implementation Plan**

The reference identified in the table below identifies a significant DOE enhancement made to the draft implementation plan resulting from the need to provide greater clarification on certain topics as well as provide significant updated information. The table provided below also identifies the basis for the enhancement. The referenced pages are included in Section 3 of this document.

**Significant DOE Enhancement**

Significant DOE Enhancement To Draft (Page/Line Nos.)	Basis for Enhancement
1. P. 24/lines 7-9	Process knowledge and recent experience with D&D for Plant 1, Boiler Plant, and Plant 9 have proven that non-process systems and newer used systems do not contain process residues. Therefore, it is deemed advisable to state that, "Non-process utility lines (steam, sewer, air, electric, water, condensate, etc.) or piping systems that are new and never put into service will not require inspection prior to placement in the OSDF."

**SECTION 3****Redline/Strikeout Pages Resulting from U.S. EPA/Ohio EPA Comments and DOE Enhancements to the Draft Maintenance/Tank Farm Complex Implementation Plan**

The pages contained in this section are shown in redline/strikeout form to show how text from the draft version of the implementation plan was affected by U.S. EPA/Ohio EPA comments and DOE responses presented in Section 1, and by a DOE enhancement identified in Section 2. Upon approval of the revisions contained in Section 3, the redline/strikeout markings will be removed to finalize the document.

- D**
- Hazardous Waste Management Unit decontamination; 1
  - asbestos abatement/removal; 2
  - surface decontamination; 3
  - above-grade component dismantlement; 4
  - material management; and, 5
  - Environmental monitoring. 6

**\* \* \* Start of Change due to U.S. EPA Specific Comment #1 \* \* \***

The following components are included in the Maintenance/Tank Farm Complex: 8

- Component 12A - Main Maintenance Building; 9
- Component 12B - Cylinder Storage Building; 10
- Component 12C - Lumber Storage Building; 11
- Component 12D - Maintenance Building Warehouse; 12
- Component 24B - Railroad Engine House; 13
- Component 38A - Propane Storage; 14
- Component 38B - Cylinder Filling Station; 15
- Component 19A - Main Tank Farm; 16
- Component 19C - Tank Farm Control House; 17
- Component 19D - Old North Tank Farm; 18
- Component 19E - Tank Farm Lime Slitter Building; 19
- Component 20A - Pump Station and Power Center; 20
- Component 20H - Process Water Storage Tank; 21
- Component 64 - Thorium Warehouse; 22
- Component 65 - Old Plant 5 Warehouse; 23
- Component G-001 - Rail Road Locomotive; and, 24
- Component G-008 - Pipe bridges. 25

~~Two additional components are being included within the subcontract SOW as options. These two components are:~~ 26  
27

- ~~• Building 64 - Thorium Warehouse;~~ 28
- ~~• Building 65 - Old Plant 5 Warehouse; and,~~ 29

**F**

The OU3 Prioritization and Sequencing Report (PSR) identified two of the above components, 30  
namely 20A and 20H, as part of the Boiler Plant/Water Plant (BP/WP) Complex but they were 31  
included only as options in the BP/WP Complex D&D project subcontract. Component 20A 32  
was optional because it was the electrical point source for the remediation subcontractor. 33  
This component is now being included in the Maintenance/Tank Farm Complex work scope. 34

**T**

Component 20H, a 750,000 gallon water storage tank, was an option in the BP/WP Complex 35  
D&D subcontract because it was needed as a back up to the city water source. Before this 36  
component can be removed from service and dismantled, a new replacement water storage 37  
tank must be constructed to support the FEMP site operational requirements for domestic 38

water, high pressure fire protection water, and possibly treated water and boiler water. The replacement tank will be of approximately 400,000 gallons capacity and its construction is included in the Maintenance/Tank Farm Complex D&D Project subcontract. The construction requirements and details for this tank are included in the project bid document. Additionally, due to its capacity, proximity to the FEMP Area 3 soils excavation area, and its serviceability, Component 20H is being considered for use by the Soils Characterization and Excavation Project (SCEP) for storm water collection and storage, and may be left intact. In the event the SCEP decides against using Component 20H in that project, it will be included in the Maintenance/Tank Farm D&D Project. Should the Maintenance/Tank Farm project include Component 20H in its scope, the regulatory agencies will be notified at that time by letter and, if necessary, the D&D schedule will be amended to include the additional scope of work. Should the schedule be amended, it will be submitted by DOE to the regulatory agencies for approval.

Building 64 (Thorium Warehouse) and Building 65 (Old Plant 5 Warehouse) are components in that were previously submitted as a part of the Thorium/Plant 9 Complex D&D Project Implementation Plan. These two buildings are currently being used by the Waste Stabilization Project, and must since they cannot be vacated by December 1998 in order to meet the Thorium/Plant 9 D&D schedule, they are now included as a part of this Maintenance/Tank Farm D&D Project Implementation Plan and are reflected in the project schedule in Section 4. However, in the event these two buildings do not become available by the December deadline, they will be included in the Maintenance/Tank Farm D&D. Should the Maintenance/Tank Farm project include Buildings 64 and 65 in its scope, the regulatory agencies will be notified at that time by letter and, if necessary, the D&D schedule will be amended to include the additional scope of work. Should the schedule be amended, it will be submitted by DOE to the regulatory agencies for approval. Because these two buildings were fully described in the Thorium/Plant 9 D&D Implementation Plan, they will not be discussed any further in this Implementation Plan.

\* \* \* End of Change due to U.S. EPA Specific Comment #1 \* \* \*

The sequence, schedule, and component-specific remediation requirements for at- and below-grade dismantlement are contingent on RD/RA scheduling for soil remediation within the former Production Area, and will be addressed in the appropriate RD/RA submittals for the SCEP.

## 2.0 GENERAL PROJECT REMEDIATION APPROACH

The overall approach to the D&D of the Maintenance/Tank Farm Complex incorporates the applicable programmatic elements and tasks that were described in Section 3 of the OU3 Integrated RD/RA Work Plan. This section describes the notable aspects of the overall approach evaluated during remedial design and addressed in the subcontract documents.

### 2.1 Sequencing of Remediation

#### \* \* \* Start of Change due to U.S. EPA Specific Comment #3 \* \* \*

Although the actual sequence of the remediation project activities may vary, it is anticipated that the new water storage tank construction will begin prior to remediation of MTF components. The remediation sequence begins with Tank Farm Components 19A, 19C, 19D and 19E since these will be available for D&D first. D&D of Building 12A and the ancillary structures will start after the commencement of the Tank Farm Components. The ancillary structures 12B, 12C, and 12D, G-001, and G-008 will be done concurrent with Building 12A and will be followed by Components 24B, 38A, and 38B, and Component 20A.

#### \* \* \* End of Change due to U.S. EPA Specific Comment #3 \* \* \*

#### \* \* \* Start of Change due to U.S. EPA Specific Comment #1 \* \* \*

If it is determined that the SCEP will not use Component 20H, it will be dismantled next after Component 20A. If Buildings 64 and 65 have not been vacated in time to allow their inclusion in the Thorium/Plant 9 D&D Project by December 1998 and they become part of the scope of the Maintenance/Tank Farm subcontract (i.e., the option is exercised), then they will be last in the remediation sequence for the Maintenance/Tank Farm D&D Project.

#### \* \* \* End of Change due to U.S. EPA Specific Comment #1 \* \* \*

### 2.2 Characterization of the Maintenance/Tank Farm Complex

The processes and operations that were performed in the Maintenance Buildings (Components 12A, 12B, 12C, 12D, 24B, 38A and 38B) during production consisted of equipment maintenance, welding, machining, carpentry, painting, storage of maintenance and expendable supplies, compressed gas storage, locomotive maintenance and bulk propane storage. No radiological processes were performed in these components.

\* \* \* Start of Change due to U.S. EPA Specific Comment #4 \* \* \*

Primary Interim Storage/Disposition Plan

The primary strategy for interim storage of OU3 materials is described globally in the OU3 Integrated RD/RA Work Plan. Based on the latest projections for the availability of containers and the placement schedule of the OSDF, it is intended that the debris generated from the D&D of the Maintenance/Tank Farm components will be containerized as generated and transferred to the OSDF for disposal. If the OSDF placement schedule is interrupted, the containers of debris will be placed in interim storage on the Plant 1 Pad or as determined by Waste Programs Management.

Since all bulk stockpiled debris will have to meet release criteria for exposure to the environment (defined in Part 8 of the subcontract document), along with the fact that any materials that fail to meet the release criteria will be containerized and stored on the Plant 1 Pad, potential contaminant releases will be negligible. Prevention or minimization of contaminant releases are achieved by reduction of surface contamination on surfaces of debris using approved in-situ decontamination methods. Additional treatment of debris would be employed (e.g., amended water spray on debris surfaces) in the event of suspected contaminant release.

The duration for interim storage of materials to be placed in the On-Site Disposal Facility (OSDF) depends on the OSDF material placement schedule. Materials generated that do not meet the OSDF WAC are expected to be dispositioned off-site within six months of generation. Materials not identified for immediate off-site disposition will be placed in the queuing area by the remediation subcontractor to allow for FEMP waste management inspection prior to relocation to the designated interim storage facility.

Alternate Interim Material Storage Plan

Currently, FEMP personnel manage an inventory of approximately (150) roll-off boxes. More than (100) ROBs contain Category I debris, which is a waste stream that cannot be stockpiled. Due to the limited amount of ROBs, additional Category I waste being generated from other



concurrent projects, and the construction schedule delay of On-Site Disposal Facility (OSDF), a shortage of ROB's can occur resulting in the need to stockpile Category A, B, D, and E materials. Also, with the amount of Category B and D debris being unloaded at Plant 1 Pad every day, stockpile space is diminishing. Consequently, an interim debris storage alternative must be pursued.

In the event that for the above reasons, a sufficient number of containers are not available at the start of the Maintenance/Tank Farm Complex D&D, an alternate interim material storage plan has been developed. For Categories A (accessible metals), B (inaccessible metals), D (light gauge painted metals, excluding lead), and E (concrete), it is planned that those materials will be size-reduced, commingled into separate stockpiles by component, and, depending on the component from which they are generated, stored on either the Component 12A, 19A, or 20H slab. As stated above in paragraph two of the Material Handling/Staging Section, the MSCC is allowing for commingling of OU3 debris categories A, B, D, and E loaded into roll-off boxes. If it becomes necessary to stockpile the debris from the Maintenance/Tank Farm Complex rather than load directly into roll-off boxes, which is the primary plan, commingling the debris categories in the stockpiles will allow for a more efficient use of the available space and ultimately lend itself to more efficient loading of roll-off boxes whenever they become available.

Materials from Components 12A, 12B, 12C, 12D, 20A, 24B, 38A, and 38B will be stored on the Component 12A slab. Calculations show that this storage will require 38,750 ft<sup>2</sup> of space, and approximately 60,000 ft<sup>2</sup> of capacity will be available. Materials from Components 19A, 19C, 19D, 19E, and the pipe bridges will be stored on the Component 19A slab. Calculations show that this will require approximately 19,347 ft<sup>2</sup> of storage space, and approximately 19,850 ft<sup>2</sup> are available. Materials generated from Component 20H will be stored on its own slab. This will require 3,520 ft<sup>2</sup> of space, and 5,150 ft<sup>2</sup> will be available.

The decision to use the Building 12A slab for bulk storage of Categories A, B, D, and E debris has been made consistent with the authority and criteria established under OU3 Integrated RD/RA Work Plan. These criteria specify the selection of debris storage locations in decreasing order of preferred usage: Plant 1 Pad, Plant 7 Slab, Plant 4 Slab, Plant 8 Slab,

and slabs of dismantled buildings; and specifies the use of engineering controls to prevent potential contaminant releases. Similar to the preparation and use of slabs from Plant 7 and Plant 4 for interim storage of debris, all necessary engineering controls will be provided for the Building 12A slab as required by the OU3 Integrated RD/RA Work Plan. Such engineering controls would include storm water runoff collection and treatment, as necessary, in the site waste water treatment system.

As in the Primary Plan, materials not identified for immediate off-site disposition will be placed in the queuing area by the remediation subcontractor to allow for FEMP waste management inspection prior to relocation to the designated interim storage facility.

\* \* \* End of Change due to U.S. EPA Specific Comment #4 \* \* \*

### Material Tracking and Reporting

Material tracking and reporting will be accomplished through use of the Site-Wide Information, Forecasting, and Tracking System (SWIFTS). Section 3.3.2.2 (Segregation, Containerization, Tracking) of the OU3 Integrated RD/RA Work Plan describes material tracking and reporting using SWIFTS. Project-specific material tracking and reporting strategies for the Maintenance/Tank Farm Complex project do not differ from the strategies laid out in the OU3 Integrated RD/RA Work Plan and therefore no additional details were developed during the Maintenance/Tank Farm Complex design. It should be noted that SWIFTS data on the Maintenance/Tank Farm Complex at this time are only estimated volumes and weights for the various OU3 categories. Those data are provided in Tables 2-2, 2-3, and 2-4 of this Implementation Plan. Actual volumes, weights, and interim storage locations will not be available until after materials have been generated and placed in interim storage, whereupon they will be reported to U. S. EPA in the project completion report for the M/TF Complex.

\* \* \* Start of Change due to U.S. EPA Specific Comment #5 \* \* \*

Regarding commingled waste, OU3 Categories A, B, D, and E debris are classified as OSDF Category 2 material. Therefore, commingled Categories A, B, D, and E quantities will be tracked as Category 2 debris in interim storage. Estimated quantities for each of the OU3 categories can be provided.

\* \* \* End of Change due to U.S. EPA Specific Comment #5 \* \* \*

### Treatment and Disposition

The project-specific disposition strategy for materials generated during this project is consistent with the strategies presented in the OU3 Integrated RD/RA Work Plan. Treatment and disposition decisions for project materials were made in accordance with the requirements stated in the OU3 Final Action ROD.

#### **\* \* \* Start of DOE Enhancement #1 \* \* \***

Non-process utility lines (steam, sewer, air, electric, water, condensate, etc.) or piping systems that are new and never put into service will not require inspection prior to placement in the OSDF.

**R**

#### **\* \* \* End of DOE Enhancement #1 \* \* \***

Table 2-2 identifies the disposition determination for project materials. Treatment will be required prior to the disposal of the lead flashing. This material is projected to be shipped to the Envirocare of Utah facility in Cleve, Utah for treatment and burial. Accessible metals (Category A) from the complex have been evaluated for potential recycling options and a summary of that evaluation is available in Appendix B.

**A**

### **2.3.5 Water Storage Tank Construction Waste**

Prior to the D&D of Component 20H (Process Water Tank) a new water storage tank will be constructed and placed into service. The construction of this tank will generate a limited volume of potentially contaminated waste materials. Table 2-5 below provides the estimated volumes of these wastes.

**F**

**Table 2-5 Water Storage Tank Construction Waste Estimates**

Waste Description	Volume			Interim Storage	Disposition
	Bulked ft3	Unbulkied ft3	Tons		
Non-contaminated asphalt	162	125	10	Soil Pile 3	OSDF
Soil	8,580	7,150	279	Soil Pile 3	OSDF

**T**

### 2.3.6 Material Recycling/Reuse

\* \* \* Start of Change due to U.S. EPA General Comment #2 \* \* \*

~~Accessible metals (Category A) from the complex have been evaluated for potential recycling options and a detailed summary of that evaluation is available in Appendix B. Using the Decision Methodology For Fernald Material Disposition Alternatives (The "Decision Methodology"), 501 tons of potentially recyclable accessible metals (OU3 Debris Category A) from all Maintenance/Tank Farm Complex components were evaluated by comparing the four leading alternatives to on-site disposal. Of the three phases of the Decision Methodology (Threshold Phase, Life Cycle Analysis Phase, and Decision Phase), only the first phase was applied since the comparative evaluation of project costs for each alternative showed that the total costs for each of the recycling options greatly exceed the 25 percent total cost criteria compared to the OSDF.~~

Accessible metals (OU3 Debris Category A) from the Complex have been evaluated for potential recycling options using the Decision Methodology For Fernald Material Disposition Alternatives (the "Decision Methodology"), and a detailed summary of that evaluation is available in Appendix B. As shown in Table 2-4, there are 501 tons of potentially recyclable accessible metals from all Maintenance/Tank Farm Complex components, and these accessible metals were evaluated by comparing the four leading alternatives to on-site disposal.

Table B-1 (Appendix B) shows that the estimated cost of placing all 501 tons of accessible metals into the On-Site Disposal Facility is \$40,000, and the cost of any of the other four alternatives is significantly higher. As an example, the cost of recycling the structural steel under the "Recycle 2000" alternative is \$1.20 per pound, compared with \$.04 per pound to place this steel in the OSDF. Therefore, of the three phases of the Decision Methodology (Threshold Phase, Life Cycle Analysis Phase, and Decision Phase), only the first phase was applied since the comparative evaluation of project costs for each alternative showed that the total costs for each of the recycling options greatly exceed the 25 percent total cost criteria compared to the OSDF. The logic of this approach and the estimated costs of the alternatives are derived from the Plant 4 Case Study, which will be provided separately upon request.

\* \* \* End of Change due to U.S. EPA General Comment #2 \* \* \*

## 2.5.5 Surface Decontamination

Some previous D&D activities performed for OU3 remedial actions have employed the practice of washing down all equipment and the interior surfaces of the buildings and structures prior to opening the structure to the environment. This practice was required to: 1) prevent the maximum exposed individual at the site boundary from exceeding any exposure limit; 2) protect workers from radiological contamination; and, 3) prevent releases to the environment during the D&D and interim storage of debris.

### **\*\*\* Start of Change due to U.S. EPA Specific Comment #7 \*\*\***

Radiological contamination surveys taken inside the buildings show that the highest levels of removable contamination exists on top of the piping in Building 12A. Since these surveys demonstrate that component surfaces, other than overhead piping in Building 12A, meet release criteria for exposure to the environment (defined below), in determining whether or not a wash down is required for MTF Components, the Beta-Gamma Removable values of existing radiological surveys are evaluated during design to determine if any areas may exceed facility release criteria (only the removable values are used, as it does little good to try to wash away fixed contamination). The data show that the highest levels of removable contamination exist on top of the piping in Building 12A, and therefore those areas will require the practice of washing down. Existing radiological surveys indicate that decontamination of the remaining equipment and structures will not provide any benefit to the D&D of the Maintenance/Tank Farm Complex; however, radiological surveys will be performed during D&D to determine if release criteria are indeed being met. The D&D subcontractor will use good radiological and housekeeping practices as well as ongoing contamination surveys as the D&D of the complex progresses. If warranted through survey measurements, washing of components or use of some other means of securing contaminants (such as encapsulation) will be implemented as needed.

### **\*\*\* End of Change due to U.S. EPA Specific Comment #7 \*\*\***

The remediation subcontractor and FEMP Project Management will inspect all debris for visible process residues (defined in Specification Section 01517) and conduct surveys to meet facility radiological release cleaning requirements. The facility radiological release cleaning requirements must be achieved before removing the exterior siding of a structure and prior to structural dismantlement where the exterior siding is not removed. The radiological release

### **Concrete Masonry Unit (CMU) Secondary Containment and Pedestal Removal**

Specification 03315 requires the remediation subcontractor to develop a concrete/masonry removal work plan containing information quite similar to that of the structural steel removal work plan discussed above. The CMU walls will be radiologically surveyed prior to removal to determine the need for engineering controls, such as an enclosure with ventilation or water sprays to minimize fugitive dust, during removal operations.

Specification 01515 addresses requirements relative to the preparation of the base slab during demobilization. Specifically, all openings in the slab will be filled with granular material or soils and grout to provide a flat uniform surface to minimize the chance for water accumulation and migration, and to mitigate potential safety hazards. All wire and cable will be cut away to grade from the conduit embedded in the concrete. Conduit and other slab obstructions will be cut away to grade, plugged, and covered with grout to grade level for positive drainage.

**\* \* \* Start of Change due to U.S. EPA General Comment #1 \* \* \***

#### **2.5.7 Use of New Technologies**

The promotion and/or incorporation of new and innovative technologies is to be encouraged within the MTF project to accomplish safer, quicker, or less expensive D&D. Implementation of these technologies is accomplished through the Performance Based Specifications (Appendix C).

Contractors will be strongly encouraged to propose additional creative approaches to the D&D Program, which will be evaluated by FDF Project Management for potential efficacy.

As new and innovative technologies are proven to be safe and efficient for D&D purposes, they will be added to the list of approved technologies in the applicable specifications.

**\* \* \* End of Change due to U.S. EPA General Comment #1 \* \* \***

T

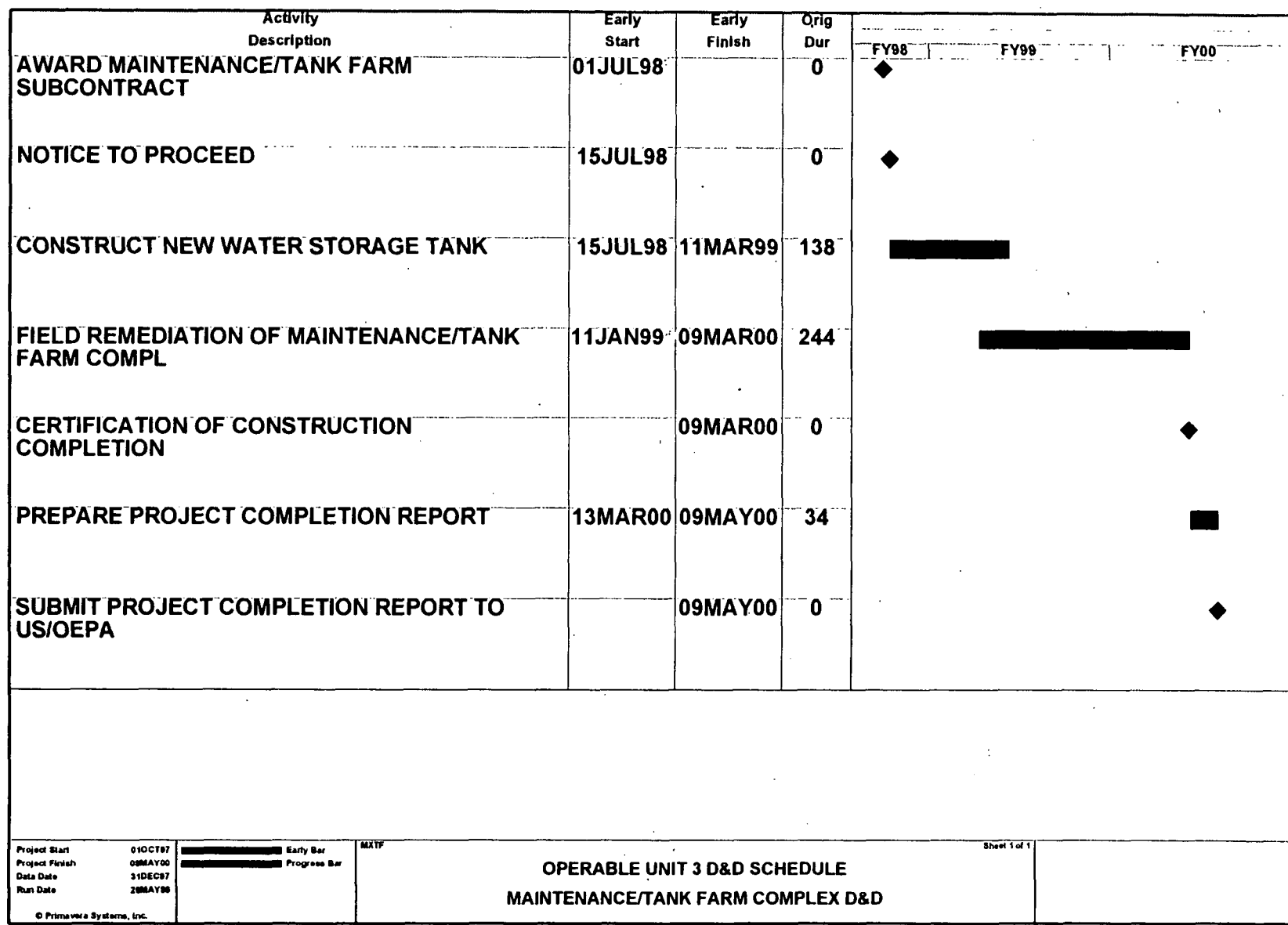


FIGURE 4-1 Maintenance/Tank Farm Complex Remediation Schedule